

HELMINTHOLOGICAL ABSTRACTS

Vol. I, No. 5.

280—Advisory Leaflet, Ministry of Agriculture and Fisheries.

- a. ANON.—“The gape worm of poultry.” No. 78, 4 pp., 1 fig. [February, 1932.]
- b. ANON.—“Round worms in poultry.” No. 79, 4 pp., 4 figs. [February, 1932.]
- c. ANON.—“Tapeworms in poultry.” No. 80, 4 pp., 3 figs. [February, 1932.]
- d. ANON.—“Red-worm disease of horses, or strongylidosis.” No. 102, 4 pp. [April, 1932.]

(a) This leaflet deals in simple language with *Syngamus trachea* as the cause of gapes in chickens. The symptoms of the disease, the morphology and life-history of the worm, preventive measures and treatment are all briefly dealt with. It is pointed out that many wild and domesticated birds carry this worm, the turkey being especially involved in its dissemination.

B.G.P.

(b) The following principal nematodes of poultry (excluding gape-worm) are described and preventive and anthelmintic measures suggested: *Heterakis gallinae*, *Ascaridia lineata*, *Amidostomum nodulosum* (the gizzard-worm of geese, the life-history of which is unknown), and the common species of *Capillaria*.

B.G.P.

(c) The tapeworms of poultry are dealt with as a group, the importance of intermediate hosts (molluscs, earthworms, flies) being stressed from the prophylactic aspect. Kamala, pomegranate-root bark and turpentine are recommended as anthelmintics.

B.G.P.

(d) In this leaflet on strongylidosis in horses a generalized probable life-history is sketched for the three strongyles and numerous cylicostomes. The writer draws attention to the dangerous immature parasitic stages in blood-vessels, liver, intestinal mucosa, etc., and therefore stresses preventive measures. The mature adults, however, are readily expelled by oil of chenopodium which should be administered under veterinary supervision.

B.G.P.

281—Annual Report (20th). United Fruit Company. Medical Department. 1931.

- a. THONNARD-NEUMANN, E.—“Treatment with di-hydranol of intestinal protozoal and helminthic infections in man.” pp. 122-126, 6 tables. [1932.]
- b. STRONG, R. P.—“Onchocerciasis in Guatemala. Preliminary report.” pp. 152-160. [1932.]

(a) Thonnard-Neumann, in a preliminary report on the use of di-hydranol (heptylresorcinol) in olive oil against intestinal helminths and protozoa, concludes that the drug is unsatisfactory against hookworm and *Trichuris*, but quite efficient against *Strongyloides* (7 cases) and *Ascaris* (4 cases).

B.G.P.

(b) In a preliminary report Strong briefly reviews the present position of *Onchocerciasis* in Guatemala, as revealed by a recent expedition.

The disease, produced by *Onchocerca caecutiens*, is contrasted with that in Africa due to *O. volvulus*. The fibromatous nodules occur mostly on the scalp, are rather smaller than in the African disease, and are not malignant. Keratitis and iritis, often leading to partial blindness or to photophobia, are probably partly due to the continued passage of microfilariae (which are apparently phototropic) through the lymphatics of the eye. Eosinophilia varies from 25-50 per cent. The adult worms, which have been successfully separated from nodules, especially by digestion with fresh papaya juice, measure: males, 2.5-3 mm. females 30-44 cm. Developmental stages, obtained from *Eusimulium avidum*, *E. ochraceum* and *E. mooseri*, are larger than those of *O. volvulus*. B.G.P.

282—Archives de Médecine Générale et Coloniale.

- a. JOYEUX, C.—“Les données parasitologiques concernant le kyste hydatique du poulmon.” 1 (5), 277-283. [May, 1932.]
- b. OLMER, D.—“Éléments du diagnostic clinique du kyste hydatique pulmonaire.” 1 (5), 284-290, 2 pls. [May, 1932.]
- c. BERTHIER, J.—“Kystes hydatiques du poulmon. Étude radiologique et examens de laboratoire.” 1 (5), 291-297, 8 figs. [May, 1932.]
- d. FIOLE, J.—“Kystes hydatiques du poulmon. Indications opératoires.” 1 (5), 298-308, 18 refs. [May, 1932.]
- e. PIERI, F.—“Traitement chirurgical des kystes hydatiques du poulmon.” 1 (5), 309-317. [May, 1932.]
- f. MOIROUD, P.—“L'importance des adhérences pleurales dans le traitement des kystes non suppurés du poulmon.” 1 (5), 320-321. [May, 1932.]
- g. COTTALORDA & PAOLI.—“À propos du kyste hydatique du poulmon.” 1 (5), 322-325. [May, 1932.]
- h. PIERI, J.—“À propos de la rupture de kystes hydatiques du poulmon.” 1 (5), 325-330. [May, 1932.]
- i. DREVON, P.—“L'image radiographique des kystes hydatiques du poulmon.” 1 (5), 330. [May, 1932.]
- j. VERNÉJOUL, R. de.—“Quatre cas de kystes hydatiques du poulmon.” 1 (5), 331-333. [May, 1932.]
- k. LIAUTARD.—“Remarques sur le diagnostic radiologique des K.H. du poulmon.” 1 (5), 333. [May, 1932.]
- l. CASSOUTE & POINSO.—“Deux cas de kystes hydatiques du poulmon chez des enfants de 10 ans et de 15 ans.” 1 (5), 333-335. [May, 1932.]

(a) Joyeux, introducing a special number devoted to hydatid of the lung, describes the life-history of the parasite, the growth of the cyst and diagnostic methods.

Cysts may originate in the lungs, through the embryo's taking the normal circulatory route or even through the egg's being inhaled, or they may appear there secondarily by metastasis from a primary cyst located elsewhere. For diagnosis precipitin, complement-fixation, and intradermal reactions are discussed. The author mentions the injection into the cyst of formolized potassium ferrocyanide, to kill the scolices and coagulate the toxic albumins, before operation. B.G.P.

(b) Olmer discusses the clinical diagnosis of pulmonary hydatid in the light of his own experience. He deals seriatim with symptoms, rupture of cyst (the adventitious layer is thinner and therefore less protective than in

other sites), and infection of cyst by typical bronchial flora. Not only dead, ruptured or punctured cysts, but even intact living cysts may apparently become infected in spite of the protective cuticular layer. B.G.P.

(c) Berthier interprets the various shadows obtained radiographically in pulmonary hydatid, describes the examination of sputum and of the fluid withdrawn after puncture, and states that the Casoni reaction is usually positive. B.G.P.

(d) Fiolle discusses the indications for operation by pneumotomy in cases of suppurative and non-suppurative hydatid cysts, respectively. B.G.P.

(e) Piéri gives the operative technique for pulmonary hydatid by direct methods (pneumotomy, marsupialisation, Lamas & Mondino method) and indirect methods ("collapse therapy," extra-pleural thoracotomy, phrenicectomy). B.G.P.

(f) Moiroud stresses the importance of pleural adhesions in treating non-suppurating hydatid. If necessary an adhesion can be artificially induced, through which the cyst may subsequently burst. B.G.P.

(g) Cottalorda and Paoli present three cases of pulmonary hydatid successfully cured by surgical intervention. In one case diagnosis was made during the operation. B.G.P.

(h) Piéri discusses at length two cases of pulmonary hydatid involving rupture of the cysts. B.G.P.

(i) Drevon states the rival opinions, that the shadow of a pulmonary hydatid in a skiagram is sharply defined and that it is of blurred outline, and concludes that both types are possible according to the absence or presence of peripheral tissue-reaction. B.G.P.

(j) Vernéjoul gives details of four satisfactory operations for pulmonary hydatid. B.G.P.

(k) Liautard submits a brief note on differential radiological diagnosis of pulmonary hydatid. B.G.P.

(l) Cassoute and Poinso, quoting Devé to the effect that 11 per cent. of hydatid cases in man are pulmonary in location, 1 per cent. of these being in children, proceed to describe two cases in children of 10 and 15 years respectively. Both were satisfactorily operated upon. B.G.P.

283—Australian Veterinary Journal.

a. GILRUTH, J. A.—"Some observations on the importance of nutrition in relation to diseases of livestock." VIII (5), 162-172. [October, 1932.]

(a) In this address Gilruth urges that the possible influence of nutrition, over-nutrition or under-nutrition, and the nature of the food supply, should never be neglected as factors in the incidence of diseases affecting a flock or herd. Favourable climatic conditions and proper nourishment which enable the young to maintain a steady and continuous growth are inimical to the development of many internal parasites. The recent work of Aston in New Zealand is quoted, in which the administration of "limonite," a naturally occurring hydrated oxide of iron, gave a remarkable degree of protection in sheep against *Ostertagia*, *Haemonchus* and

Nematodirus infections. Gilruth believes that under normal natural conditions animal parasitism really constitutes a state of "mutualism." Provided there is ample food for host and parasite little harm is done. Nevertheless parasites can never be economical from the point of view of the stockowner.

R.T.L.

284—Berliner Tierärztliche Wochenschrift.

- a. DREESBACH, F.—"Erfahrungen mit Taeniassept in der Hundepraxis." XLVIII (35), 557. [26th August, 1932.]

(a) Dreesbach gives a brief report on the satisfactory use of a proprietary anthelmintic, Taeniassept, containing filicine, thymol and areca nut extract, against tapeworms in dogs. A feature of the drug is its rapid action, within 4-12 minutes, if given after a 24-hour starvation period.

B.G.P.

285—Boletim da Secretaria da Agricultura.

- a. GÓES, C. O.—"A doença da raiz da Cana em Pernambuco." Reprint 43 pp., 39 refs. [1932.]

(a) Góes discusses the etiology of root-rot of sugar cane in Pernambuco.

The symptoms caused by *Heterodera radicola* and *Tylenchus similis*, parasites of sugar cane in other areas, are described, and nematodes found in sugar cane in Brazil are listed. None of these species have, however, been found in the affected plants in Pernambuco, although the need for further investigations is indicated. It is concluded that the root damage is due chiefly to unsuitable soil conditions which prevail in certain areas of Pernambuco.

M.J.T.

286—Chinese Medical Journal.

- a. LEE, C. U.—"Treatment of Schistosomiasis japonica with Fouadin in experimentally infected rabbits." XLVI (12), 1169-1178, 3 tables, 9 refs. [December, 1932.]
- b. HOEPPLI, R.—"Histological observations in experimental Schistosomiasis japonica." XLVI (12), 1179-1186, 7 figs, 10 refs. [December, 1932.]

(a) Fouadin tried experimentally on rabbits experimentally infected with *Schistosoma japonicum* has been found by Lee to be of therapeutic value especially if given intramuscularly rather than intravenously. In some cases ova reappeared after a period of freedom.

R.T.L.

(b) The radiating structures observed on the shell of the eggs of *Schistosoma japonicum* in sections of tissue are believed by Hoeppli to represent the secretion of the lateral glands of the miracidium which becomes strongly oxyphilic outside the egg shell. The effect of the secretion is probably one of softening and destruction. The adult worms may also produce secretions which stimulate the growth of fibrous tissue.

R.T.L.

287—Compte Rendu des Séances de la Société de Physique et d'Histoire Naturelle de Genève.

- a. ARTICLE, J. & DESHUSSES, L.—“Une anguillulose de l'hortensia (*Hydrangea hortensis* Sm.).” XLIX (1), 72-74. [January-March, 1932.]

(a) Article and Deshusses record the occurrence of *Tylenchus dipsaci* Kühn in *Hydrangea hortensis*, symptoms are described and series of measurements of the adult worms are tabulated and possible methods of control are recommended.

The distribution of the parasite is fairly widespread and the disease of long standing in certain nurseries, considerable losses having been sustained. Stunting and distortion of the aerial parts of the plants are characteristic, the flowers remaining small or failing to open. As control measures, disinfection of the soil by chemical means, hot water treatment for cuttings (50° for 3 minutes), and the cultivation of resistant varieties only, are recommended.

M.J.T.

288—Contributions to Canadian Biology and Fisheries.

- a. WARDLE, R. A.—“The Cestoda of Canadian Fishes: II. The Hudson Bay Drainage System.” VII, No. 30 (Series A, General, No. 27). 379-403, 12 figs., 48 refs. [May, 1932.]

(a) Wardle finds twelve species of adult and seven species of larval cestodes in fish in the Hudson Bay drainage system.

He describes two new sub-species of *Bothriocephalus cuspidatus* (viz., *B. hiodontis* from *Hiodon* sp. and *B. luciopercae* from *Lucioperca canadense*), and two new species of *Prætecephalus*,—*P. coregoni* in *Coregonus* sp. and *P. luciopercae* in *Lucioperca* spp. The plerocercoids of *D. latum* are common but localized in the area, Lake Winnipeg having the heaviest incidence.

T.W.M.C.

289—Gaceta Medica de Caracas.

- a. TORREALBA, J. F.—“Breves notas para el estudio de algunas parasitosis intestinales en Zaraza y otras poblaciones del Guárico y Anzoátegui.” XXXIX (23), 355-358. [15th December, 1932.]
- b. RÍSQUEZ, J. R.—“Lecciones de parasitología.” XXXIX (23), 358-362. [15th December, 1932.]

(a) Torrealba presents the results of clinical and parasitological examinations of 200 patients in Zaraza and other districts. The examinations, which were mainly intended to gauge the hookworm incidence (40.5 per cent.), revealed a number of other helminthic and protozoal infections. The findings are set out for each patient and are briefly summarized.

B.G.P.

(b) Rísquez here publishes the introductory lecture to a series, given at the Central University of Venezuela, on Parasitology. After defining the science he briefly recounts its early and recent history, and goes on to deal with the nomenclature and various methods of classifying parasites.

B.G.P.

290—Harefuah.

- a. WITENBERG, G.—“Fish as a source of worm diseases in man.” VI (3), 127-139, 5 figs. [In Hebrew; English summary p. 4.] [May-June, 1932.]

(a) Of 14 species of trematodes, 5 of tapeworms, and 1 of roundworms which are transmitted to man through eating uncooked fish, 3 are reported by Witenberg to be endemic in Palestine viz., *Heterophyes heterophyes*, *Haplorchis pumilis* and *H. taichui*. All three are found in dogs and cats but only *H. heterophyes*, with the encysted cercariae of which every mullet is infected, has been found in man in Palestine. *Dibothriocephalus latus* only occurs in immigrants. R.T.L.

291—Indian Journal of Veterinary Science and Animal Husbandry.

- a. BHALERAO, G. D.—“On the identity of the Schistosome found in cases of bovine nasal granuloma and some observations on a few other members of the Schistosomidae.” II (4), 338-356, 7 pls., 21 refs. [December, 1932.]
- b. RAO, M. A. N. & AYYAR, L. S. P.—“Triradiate tapeworms from hounds and jackal.” II (4), 397-399, 3 pls., 1 ref. [December, 1932.]
- c. RAO, M. A. N.—“*Diplopilidium nolleri*, Skrjabin 1924.” II (4), 400-401, 1 fig., 3 refs. [December, 1932.]
- d. RAO, M. A. N. & AYYAR, L. S. P.—“A preliminary report on two amphistome cercariae and their adults.” II (4), 402-405, 1 pl., 1 ref. [December, 1932.]
- e. BHALERAO, G. D.—“A note on the probability of infection of man and domestic carnivores by *Isoparorchis hypselobagri* (Billet, 1898).” II (4), 406-407, 1 fig., 4 refs. [December, 1932.]

(a) Bhalerao describes the morphology of the Bilharzia worm responsible for the production of nasal granulomata in Indian cattle in the United Provinces, Assam, Bengal, Bihar and Orissa, Central Provinces, Bengal, Bombay, Madras, Mysore and probably Sind. The author is of opinion that the parasite belongs to the species *Schistosoma spindalis* Montgomery 1906 and that the differences noted in the shape of the eggs and in the number of testes are merely variations.

The existence of *S. indicum* Montgomery 1906 in cattle and goats is recorded for the first time. A brief description is given also of *S. bovis* on material from cattle and sheep in Irak. The author is of opinion that *S. matthei* Veglia & LeRoux and *S. curassoni* Brumpt are identical with *S. bovis*. The definition of the genus *Ornithobilharzia* Odhner is modified to include the mammalian species *O. bomfordi* and *O. turkestanicum*.

R.T.L.

(b) Seven specimens of triradiate tapeworms of the genus *Taenia* have been found in the jackal and in foxhounds in the neighbourhood of Madras. The embryos have six hooks and the segments show a uterus with lateral branches and irregularly alternating genital pores.

R.T.L.

(c) The occurrence of *Diplopilidium nolleri* Skrjabin, 1924 in India in the domestic cat is noted for the first time.

R.T.L.

(d) Rao and Ayyar have ascertained experimentally that in the neighbourhood of Madras the cercaria of *Paramphistomum cervi* occurs in *Planorbis exustus* and that of *Fischoederius elongatus* in *Limnaea leuteola*.

The cercaria of *P. cervi* had been named *C. pigmentata* by Looss (1900) in Egypt and *cercaria Indicae* XXVI by Sewell.
R.T.L.

(e) The fluke *Isoparorchis hypselobagri* occurs in an immature form in the muscles of certain silurid fishes while the adult is found normally in the silurid *Wallago attu*. Bhalariao suggests that human infection may occur from eating fish imperfectly cooked and that dogs and cats should be prevented from visiting rivers and other places where infected fishes may be present.
R.T.L.

292—Indian Veterinary Journal.

- a. RAO, M. A. N. & AYYAR, L. S. P.—“Heterophyes species from dogs in Madras.” VIII (4), 251-252, 1 pl. [1932.]

(a) In 3 out of 19 stray dogs in Madras about 30 specimens of a species of *Heterophyes* were collected. This is the first record of this parasite from India. The morphological characters agree with those of *H. persicus* (Braun 1901).
R.T.L.

293—Journal of Comparative Pathology and Therapeutics.

- a. CARNE, H. R. & ROSS, I. C.—“The association of the bacillus of Preisz-Nocard with lesions caused by *Oesophagostomum columbianum* in sheep.” XLV, pp. 150-157, 1 table. [June, 1932.]

(a) Carne and Ross have investigated the causal relationship between caseous lymphadenitis in sheep and the nodular worm. They conclude that there is probably little connection between them.

Five lambs were drenched with bacterial cultures and larvae. Well marked nodular disease resulted and the presence of other intestinal worms was observed: lesions caused by the bacillus of Preisz-Nocard were seen in one mesenteric gland in only one animal, although submaxillary glands were infected in three cases. Twelve abdominal glands and three livers were invaded by the parasite but all these lesions were sterile. The oesophagostome nodules of the intestine, although not sterile, showed no trace of this bacillus. This experiment is supported by the reports of the Commonwealth Meat Inspection Service that primarily lesions of caseous lymphadenitis are rare in intestinal glands although helminths are common.
T.W.M.C.

294—Legislative Assembly of Ontario, Sessional Paper No. 29, 1932. Report of the Ontario Veterinary College, 1931.

- a. SCHOFIELD, F. W.—“Report on a disease of goats characterized by cholecystitis and infection with *Salmonella schottmulleri*.” pp. 29-39, 2 figs., 4 plates. [1932.]
b. KINGSCOTE, A. A.—“The occurrence of tapeworms of the genus *Anoplocephala* in the horse.” pp. 61-62. [1932.]

(a) Schofield records his investigations on a disease in goats in which the conspicuous pathological change is that of cholecystitis. The causal agent appears to be *Salmonella schottmulleri* but there may be a distinct etiological relationship between it and *Trichostrongylus*.
T.W.M.C.

(b) Kingscote notes, that while *Anoplocephala magna* has been found from time to time in Ontario, he has not previously found *A. mamillana*. He also records the enzootic occurrence of *Taenia taeniaeformis* in cats with a high mortality in half-grown kittens; a case of *Paragonimus kellicotti* in a ranch-raised mink, which had been fed on fish from the Great Lakes; and an enzootic in ducks caused by *Hymenolepis coronula*. T.W.M.C.

295—Mémoires du Musée Royal d'Histoire Naturelle de Belgique.

- a. DOLLFUS, R. P.—“Extrait des résultats scientifiques du voyage aux Indes Orientales Néerlandaises de LL. AA. RR. le Prince et la Princesse Léopold de Belgique. Trématodes.” II (10) [Reprint 13 pp.], 2 pl., 7 refs. [1932.]

(a) Dollfus has redescribed and illustrated the distome *Bathycotyle branchialis* Darr, 1902, parasitic on the gills of a fish. This distome, two specimens of which were the only trematodes met with during the expedition to the Dutch East Indies of T.R.H. the Prince and Princess Léopold of Belgium in 1929, was described in detail by Darr. B.G.P.

296—Monitore Zoologico Italiano.

- a. ROMITI, C.—“Contributo alla migliore conoscenza del ciclo biologico della ‘Filaria Bancrofti Cobb.’ nell'uomo.” XLIII (6), 167-170, 1 fig. [1932.]

(a) On the basis of wide clinical and surgical experience, Romiti concludes that the usual location of *Filaria bancrofti* adults in men is the lymphatics of the spermatic cord complex. Examination of peripheral blood after surgical intervention shows that the microfilariae are reduced in number, or totally disappear, within 7-14 days. This not only confirms the view that this is the usual location of the adults but also suggests a corresponding period for the life of a microfilaria. B.G.P.

297—Münchener Medizinische Wochenschrift.

- a. BÜCHNER, S.—“Askaridenkuren bei Kindern mit Helminal.” LXXIX (31), 1241. [29th July, 1932.]

(a) Büchner finds “Helminal,” a proprietary anthelmintic made from the seaweed *Digenea simplex*, effective against ascaris in children. He gives 6 tablets in 3 doses an hour apart, to be taken fasting in the morning, and after 2 hours gives a tablespoon of castor oil; this is repeated on the 2nd and 3rd day. If unsuccessful, a further treatment is given a fortnight later. The drug, which is quite harmless, is ineffective against trichuris. B.G.P.

298—Occasional Papers of the Museum of Zoology. University of Michigan.

- a. KRULL, W. H. & PRICE, H. F.—“Studies on the life history of *Diplodiscus temperatus* Stafford from the frog.” No. 237, 1-38, 2 pls. [April, 1932.]

(a) The morphology of the various stages in the development of *Diplodiscus temperatus* of the frog has been worked out by Krull and Price in the snail *Helisoma trivolvis*.

Frogs become naturally infected by devouring their own *Stratum corneum* on which the cercariae are encysted. Tadpoles take in the active cercariae

into the mouth during respiration or pick up encysted cercariae in pond ooze. Metamorphosis of the tadpole brings about a migration of the flukes into all parts of the intestine.

R.T.L.

299—Pamphlet. Department of Agriculture. Tanganyika.

- a. HARRIS, W. V.—“The migratory locust.” No. 6, 18 pp., 3 figs., 8 refs. [1932.]

(a) Harris records nematodes of the genus *Mermis* attacking hoppers and adults of the migratory locust (*Locusta migratoria migratorioides* Rch. & Frm.) in Tanganyika.

Hoppers were first observed to be parasitized at the time of the fourth moult and those which were five days late in moulting were infested to an extent of 90 per cent. with *Mermis*. The effect of parasitism in hoppers was the reduction of the fat body, loss of rigidity in the alimentary canal and, in insects of the fifth instar, a distinct change in colour. The author states that there is reason to suppose that infestation of the adult female insects inhibits egg production, and quotes Uvarov who mentions that infection occurs when the locusts eat *Mermis* eggs that have been deposited upon food plants. The parasitic association was apparently first observed in the desert locust (*Schistocerca gregaria* Forsk.).

Other natural enemies and control measures as well as the bionomics of the locust are discussed.

J.N.O.

300—Parasitology.

- a. MURRAY, F. V.—“Note on a Microcotylid from *Sciaena antarctica*.” XXIV (3), 448. [October, 1932.]

(a) For *Microcotyle sciaenae* Murray, 1932 preoccupied, Miss Murray proposes the new name *M. sciaenicola*.

R.T.L.

301—Pharmazeutische Zeitung.

- a. LILLIG, R.—“Vegetabilische Wurmmittel und ihre wirksamen Bestandteile.” LXXVII (87), 1121-1126. [29th October, 1932.]

(a) Lillig here gives in tabular form an extensive list of plants containing active components with anthelmintic properties. The plants are listed under the principal divisions: Algae, Fungi, Lichenes, Filicines, Gymnospermae and Angiospermae, and in each division in alphabetical order of families. The column-heads are: (i) Scientific name of plant, (ii) Synonyms, (iii) Family, (iv) Part of plant used, (v) Geographical distribution and (vi) Active components.

B.G.P.

302—Prager Archiv für Tiermedizin und Vergleichende Pathologie.

- a. FREUND, L.—“Parasitologische Zeitfragen. I. Normale und pathologische Parasitologie.” XII (2), 35-37. [February, 1932.]

(a) Freund suggests that in nature, apart from man and the domesticated animals, parasitism is a normal relationship between parasite and host, an equilibrium which could not have persisted throughout the ages if it had entailed serious danger to the host.

Among the domesticated (and other captive) animals and man, where nutrition, propagation and the whole mode of living are under human control, this equilibrium is upset; the number of parasites in a given host increases beyond the safety limit, or resistance is lowered, and an abnormal pathological parasitism results. Man's natural preoccupation with this latter should not prevent the study of normal parasitism, which should rather be regarded as a necessary foundation. B.G.P.

303—Proceedings of the Muslim Association for the Advancement of Science.

- a. MIRZA, M. B.—“Dracontiasis (Naru) in Shorapur (H. E. H. the Nizam's State.)” [Reprint pp. 43-47.] [November, 1932.]

(a) Mirza finds that Dracontiasis occurs in about 95 per cent. of the population of Shorapur, a town of 15,000 inhabitants in the South-West part of the Nizam's Dominions. R.T.L.

304—Proceedings of the United States National Museum.

- a. HARWOOD, P. D.—“The helminths parasitic in the amphibia and reptilia of Houston, Texas, and vicinity.” LXXXI (Art. 17), 1-71, 5 pls., 78 refs. [1932.]

(a) From over 500 animals of 50 species of hosts in the region of Houston, Texas, U.S.A., Harwood has collected and annotated 29 species of trematodes. Of these 12 are described as new: 12 species of cestodes of which 6 are new, including one for which a new genus is created; one species of Acanthocephala and 24 species of nematodes of which 9 are new. The new trematodes are:—*Polystoma* (*Polystomoides*) *terrapienis*; *Meso-coelium americanum*, *Brachycoelium storeriae*, *B. meridionalis*, *B. daviesi*, *Glypthelmins subtropica*, *Haematoloechus floedae*, *H. uniplexus*, *Renifer texanus*, *Cercorchis texanus*, *C. bairdi*, *Protenes chapmani*.

The new cestodes are:—*Oochoristica natricis*, *O. anolis*, *O. eumecis*, *O. americana*, *O. elaphis*, *Diochetos phrynosomatis* n. g., n. sp. The new nematodes are:—*Falcaustra chelydrae*, *Cruzia testudinis*, *Pharyngodon warneri*, *Atractis carolinae*, *Kalicephalus agkistrodontis*, (and *K. a. flagellus*), *K. rectiphilis*, *Physaloptera squamatae*, *Thubunaea leiolopismae*, *Capillaria serpentina*, *C. heterodontis*.

The new genus *Diochetos* belongs to the Linstowinae and has relatively few segments. When mature these are from 2 to 6 times as long as broad. Genital pores alternate irregularly. Testes are very numerous. Uterus breaks up into capsules containing a single egg. The type and only species occurs in lizards of the genus *Phrynosoma*. R.T.L.

305—Queensland Agricultural Journal.

- a. ROBERTS, F. H. S.—“Experiments in the treatment of stomach worms in sheep.” XXXVIII (6), 493-507, 8 tables, 28 refs. [December, 1932.]

(a) Roberts finds that the most important cause of parasitic gastro-enteritis in Queensland is *H. contortus*: other important parasites are *O. columbianum*, *D. filaria* and *Moniezia* spp.: smaller trichostrongyles appear to be of minor importance.

He finds that the most useful drug for *Haemonchus* is 5 c.c. of a mixture of paraffin and carbon tetrachloride containing 2 c.c. of the latter for adult sheep and 1 c.c. for lambs. Arsenic and magnesium sulphate, copper sulphate and mustard were also highly efficient but tetrachlorethylene was disappointing. Arsenic and magnesium sulphate appeared to be very successful against *Moniezia*.

T.W.M.C.

306—Revista de Biologia e Hygiene.

- a. ARTIGAS, P. & PACHECO, G.—“*Chiostichorchis myopotami* (Artigas e Pacheco, 1932), parasito do *Myocastor coipus*. *Chiostichorchis* n. gn. (Trematoda: Paramphistomidae).” III (3/4), 103-111, 7 figs., 6 refs. [December, 1932.]

(a) Artigas and Pacheco have erected a new genus, viz., *Chiostichorchis*, to receive a fluke, previously described under the name of *Stichorchis myopotami*, from the caecum of the Coypu rat, *Myocastor coipus*.

A morphological description, including a table of the principal measurements, is given and is used by the authors in discussing the reason for the exclusion of the form from the genus *Stichorchis*. They conclude, after a consideration of the various genera of the Cladorchiinae, that the erection of a new genus, a diagnosis of which is given, is desirable, and state that the type species is therefore *Chiostichorchis myopotami* (Artigas & Pacheco, 1932).

J.N.O.

307—Revue de Microbiologie d'Epidémiologie, et de Parasitologie.

- a. SCHULZ, R. E.—“Trematoden der Gattung *Plagiorchis* Lühe der Nagetiere.” XI (1), 53-60, 4 figs. [1932.]
- b. SASSUCHIN, D. & TIFLOV, V.—“Les ento- et ectoparasites de *Citellus pygmaeus* Pall.” XI (2), 129-132, 46 refs. [1932.]

(a) Schulz here reviews those species of *Plagiorchis* which occur in rodents in Russia.

The author describes and illustrates *Plagiorchis* (*Plagiorchis*) *proximus* from *Ondatra zibetica*, *Plagiorchis* (*P.*) *maculosus citelli* n. subsp. from *Citellus musicus planicola*, *P.* (*P.*) *obensis* n. sp. from *Cricetus* sp., *P.* (*Multi-glandularis*) *eutamias* n. sp. from *Eutamias asiaticus* and *P.* (*M.*) *arvicolae* from *Arvicola terrestris*. *Plagiorchis* contains some 50 species from various orders of vertebrates, but specimens show great variability and a much-needed revision might reduce the species to 15 or 20; data on host-specificity are first required, however.

B.G.P.

(b) Sassuchin and Tiflov list the intestinal parasites, haematozoa and ectoparasites of *Citellus pygmaeus*, a destructive pest and a plague-carrier in the S.E. of Russia. The helminths comprise *Plagiorchis maculosus citelli*, *Hymenolepis ognevi*, *Moniliformis moniliformis*, and 11 nematode species.

B.G.P.

308—Roosevelt Wild Life Annals.

- a. MUELLER, J. F. & VAN CLEAVE, H. J.—“Parasites of Oneida Lake Fishes. II. Descriptions of new species and some general taxonomic considerations, especially concerning the trematode family Heterophyidae.” III (2), 79-137, 25 pl., 60 refs. [October, 1932.]

(a) J. F. Mueller and H. J. Van Cleave have supplemented their previous report [see Helm. Abs. Vol. I., No. 24a] on the parasites of fishes in Lake Oneida. These comprise seven new trematodes, viz., *Allacanthochoasmus artus*, *Allocreadium halli*, *Triganodistomum attenuatum*, *T. simeri*, *Neascus grandis*, *Gyrodactylus cylindriciformis*, *Dactylogyrus extensus*, one cestode, viz., *Bothriocephalus formosus* and one nematode *Hepaticola bakeri*. In addition a number of general taxonomic problems are discussed. In section 2 *Spinitectus gracilis* and *S. carolini* are redescribed. Section 3 gives a synopsis of the Heterophyidae of North American freshwater fishes, and in section 4 the relationships of the genus *Microphallus* are discussed. It is incompatibly different from the Heterophyidae and warrants the recognition of a family *Microphallidae* from which the genera *Levinsoniella*, *Spelotrema*, *Spellophallus*, *Monocaecum* and *Maritrema* should be excluded until a more detailed knowledge of their morphology is available. R.T.L.

309—Taiwan Igakkai Zasshi.

- a. KATSUTA, I.—“Über Cercarien als Parasiten von Schnecken in halbsalzigem Wasser, insbesondere über eine Art von cystophoren Cercarien.” xxxi (12), No. 333. [German summary pp. 113-114.] [December, 1932.]
- b. KATSUTA, I.—“Über den Genitalnapf-Bauchsaugnapf-Apparat und dessen Adnexe als einem für die zu *Stellantchasmus* gehörigen Trematoden eigentümlichen Apparat.” xxxi (12), No. 333. [German summary pp. 114-115.] [December, 1932.]

(a) Katsuta gives a preliminary account of a cystophorous cercaria found in *Cerithium corallium* and *C. concisum humile* in brackish water near the mouth of the Tamsui, Formosa. R.T.L.

(b) Katsuta finds that *Stellantchasmus formosanus* and *S. falcatus* belong to the Heterophyidae. The genital-ventral sucker and its adnexe are described and figured. R.T.L.

310—Tierärztliche Rundschau.

- a. KOOP, L.—“Über meine Erfahrungen in der Leberegelbehandlung mit ‘Distex-Atarost’ einer Filicin-Chlorkohlenwasserstoffverbindung.” xxxviii (7), 115. [14th February, 1932.]
- b. CURTZE, W.—“Intrauterine Leberegelinvasion bei einem Kalbe.” xxxviii (13), 214. [27th March, 1932.]

(a) The main loss from liver fluke in cattle is, according to Koop, the considerable decrease in the yield of milk and meat and in retarded growth. A cheap, safe and effective treatment is Distex-Atarost. R.T.L.

(b) Curtze reports a case of a six-days-old calf, fed only on milk, which contained immature liver flukes in nodules on or below the surface of the liver—there were no flukes in the bile ducts. The infection was almost certainly intra-uterine. B.G.P.

311—Transactions of the Far Eastern Association of Tropical Medicine. (8th Congress, 1930.)

- a. BONNE, C.—“A few remarks on two rare parasitic diseases in the Malayan Archipelago. A. Chromoblastomycosis. B. Sparganosis.” No. 75, pp. 184-188. [March, 1932.]

(a) Sparganosis has only once been recorded from man in the Dutch East Indies. A specimen has been found by Bonne at post mortem in a

large haemorrhagic infarct of the lower lobe of the right lung in a labourer from Sumatra. There was also thrombosis of the cerebral and renal arteries and local peritonitis which may have been due to the migrations of the parasite.

R.T.L.

312—Transactions of the Royal Society of Canada.

- a. WARDLE, R. A.—“The limitations of metromorphic characters in the differentiation of cestoda.” 3rd Series, XXVI (5), 193-204, 2 figs. [1932.]

(a) Wardle, confronted by the difficulties in specific diagnosis of cestodes, discusses the value of the various characters in classification. He believes that species should be separated primarily on the basis of non-adaptive characters (such as the relative positions of genital organs) and secondarily on adaptive characters (such as shape and dimensions). Forms agreeing in non-adaptive characters but disagreeing in others, and differing in host-distribution, should be regarded as *sub-species*, while those which are coincident in host-distribution should be regarded as *morphae*. T.W.M.C.

313—University of California Publications in Zoology.

- a. INGLES, L. G.—“Four new species of *Haematoloechus* (Trematoda) from *Rana aurora draytoni* from California.” XXXVII (7), 189-202, 9 figs. [1932.]
 b. INGLES, L. G.—“*Cephalogonimus brevicirrus*, a new species of trematode from the intestine of *Rana aurora* from California.” XXXVII (8), 203-210, 1 pl. [1932.]

(a) To the genus *Haematoloechus* Ingles adds *H. kernensis*, *H. oxyorchis*, *H. confusus* and *H. tumidus* as new species collected from the lungs of the Californian red-legged frog *Rana aurora draytoni*. R.T.L.

(b) To the nine known species of *Cephalogonimus* Ingles adds *C. brevicirrus* n. sp. from *Rana aurora draytoni* collected near Bakersfield. It is closely related to *C. americanus*. R.T.L.

314—Verslagen en Mededeelingen van den Plantenziekten Dienst te Wageningen.

- a. POETEREN, N. VAN.—“Verslag over de werkzaamheden van den Plantenziektenkundigen Dienst in het jaar 1931.” No. 66, 134 pp. [August, 1932.]

(a) Van Poeteren reports the occurrence of disease conditions in gherkins associated with the presence of *Tylenchus devastatrix* Kühn.

The plants, which were grown on land adjacent to a plot where onions had been badly attacked by *T. devastatrix*, died as a result of rotting at the base, and the shoots were found to be swarming with the eelworm. This infection is of importance in respect of crop rotation. M.J.T.

315—Veterinarski Arhiv.

- a. ČEH, J.—“Trakulje pri navidezno zdravih kokoših.” II (1), 1-15, 10 pls., 11 refs. [January, 1932.]
 b. GORUP, M.—“Zaražljivost suvoga sijena iz sušne godine iz kraja stationarno zaraženog Distomatozom. Prilog aetiologiji Distomatoze.” II (2), 63-76, 3 tables. [February, 1932.]

- c. VASILJEV, M.—“Telazijske invazije očiju kod goveda motrene na klaonici grada Zagreba u 1930. godini.” II (2), 77-91, 5 tables, 16 figs., 8 refs [February, 1932.]
- d. DEVIDE, J.—“Prilozi upoznavanju leukocitarne krvne slike govosa s naročitim obzirom na leukocitozu prilikom probave.” II (6 & 7), 260-310, 3 tables. [June & July, 1932.]

(a) Čeh has examined 500 fowls for tapeworms and has found 19·4 per cent. infected. *Davainea* (6 spp.), *Monopylidium*, *Amoebotaenia*, *Fimbriaria* and *Hymenolepis* (1 sp. each) are recorded, and in addition 8 unidentified species are described. Apart from cestodes *Heterakis vesicularis* was present in 40·4 per cent. and *H. perspicillum* in 13·6 per cent. of the fowls. B.G.P.

(b) Gorup has shown that encysted cercariae of *Fasciola hepatica* are very resistant to desiccation, by feeding infected dry hay, collected in a dry year, to sheep and cattle.

45 per cent. of the sheep and 33 per cent. of the cattle became lightly infected, ova appearing on the 60th day. The same hay was harmless after exposure to a temperature of -25°C. B.G.P.

(c) Vasiljev has found *Thelazia* infections of the eye in over 20 per cent. of the cattle at the Zagreb abattoir during 1930.

The commonest species was *Thelazia rhodesi*, but *T. gulosa* and *T. skrjabini* also occurred, sometimes all three in the same eye. Maximum infections were found in the “buša” variety of cattle, in the 5th-6th years, in males, and in the months July-September, respectively. B.G.P.

(d) Devidé has found, in the course of an extensive investigation of the leucocytic blood-picture of cattle with special reference to digestive leucocytosis, that the presence of liver-fluke modifies the picture. Thus, infection raised the average white-cell count, before feeding, from 9,272 to 9,692 per cm., and invariably caused an eosinophilia. However, some high eosinophile percentages were found even in healthy cattle: 1·5 per cent.—21·5 per cent., average 7 per cent. B.G.P.

316—Vida Nueva.

- a. KOURI, P. & ARENAS, R.—“Actual conditions of the hepatic distomatosis [sic] in Cuba. Its treatment. Previous statements about its prophylaxis.” XXIX (5), 464-468, [Spanish version pp. 458-463 and French pp. 469-474.] [15th May, 1932.]

(a) Kouri and Arenas state that since July 1931 there have been 12 human cases of hepatic distomiasis in Cuba, 8 due to *Fasciola hepatica* and 4 to *Clonorchis sinensis*, the latter in Chinese. Emetine hydrochloride appears to be a specific against *F. hepatica* in man and the authors are testing this drug on cattle also. B.G.P.

317—Wiener Tierärztliche Monatsschrift.

- a. KELLER, L.—“Über primär verkalkte Trichinen.” XIX (16), 492-494. 5 figs. [15th August, 1932.]

(a) Calcification of *Trichinella* cysts very rarely occurs at the poles. Keller figures and describes in detail the different types of calcification of the worms in the cysts. R.T.L.

318—Zeitschrift für Fleisch- und Milchhygiene.

- a. MÜLLER, B.—“Zur Finnenuntersuchungstechnik.” XLII (23), 457-458. [1st September, 1932.]
- b. FUNCK, E.—“Weiteres zum Vorkommen des *Cysticercus inermis* im Schlunde.” XLII (23), 458. [1st September, 1932.]
- c. BÄURLE, O.—“Die Reissmannsche Methode bei Trichinenuntersuchungen.” XLIII (4), 64-65. [15th November, 1932.]

(a) Müller makes a plea for a more careful examination of beef carcasses for *Cysticercus bovis* in Germany. He suggests that the technique of inspection should be standardized, two incisions being made into each masseter.

B.G.P.

(b) Funck has met with 5 cases of living *Cysticercus bovis* in the connective tissue surrounding the oesophagus of cattle during the past two years.

B.G.P.

(c) Bäurle finds that the Reissmann method of trichinella inspection, i.e., examination of the diaphragm in the region of the central tendon, is reliable. Larvae were found in this location in 79 of 82 trichinous pigs at the Munich abattoir, the other 3 being very lightly infested. Among 6 other likely sites the tongue was infested in 71 pigs.

B.G.P.

319—Zeitschrift für Parasitenkunde.

- a. CHITWOOD, B. G.—“A synopsis of the nematodes parasitic in insects of the family Blattidae.” V (1), 14-50, 59 figs., 16 refs. [November, 1932.]
- b. BYCHOWSKY, B.—“Die russischen Pneumonoecis-Arten und ihre geographische Verbreitung.” V (1), 51-68, 7 figs., 13 refs. [November, 1932.]
- c. WINOGRADOWA, T.—“*Trichocephalus affinis* und *Paramphistomum cervi* im Rentier.” V (1), 80-84, 2 refs. [November, 1932.]
- d. ECKMANN, F.—“Beiträge zur Kenntnis der Trematodenfamilie Bucephalidae.” V (1), 94-111, 8 figs., 30 refs. [November, 1932.]
- e. KREIS, H. A.—“Beiträge zur Kenntnis pflanzenparasitischer Nematoden.” V (1), 184-194, 1 pl., 9 refs. [November, 1932.]
- f. WITENBERG, G.—“Über zwei in Palästina in Hunden und Katzen parasitierende *Echinochasmus*-Arten (Trematoda).” V (1), 213-216, 4 figs., 3 refs. [November, 1932.]

(a) Chitwood has brought together the essentials of the descriptions of all known nematode parasites in cockroaches of the family Blattidae and has redescribed and refigured as many as possible of the species that were at his disposal as well as figuring and describing nine new species, five of which are designated as types of new genera.

The forms are all oxyurid parasites and belong to the family Thelastomidae Travassos 1929, which has been reviewed in relation to the subfamilies and genera considered by the author.

Lepidonemidae, a family proposed by Travassos in 1920, is regarded as a synonym despite its date priority on the ground that *Thelastoma* is a more representative genus than *Lepidonema*. Three subfamilies, Thelastominae Travassos, 1929 (=Aorurinae Walton, 1927), Hystrignathinae Travassos, 1920 (not considered in the paper) and Protrelloidinae n. subfam. are included.

Within the first subfamily eight genera are considered: (1) *Thelastoma* Leidy, 1849 (= *Bulhøesia* Schwenk, 1926) divided into three groups, (a) *sensu restricto* to include *T. bulhøesi* (Magalhães) and *T. riveroi* n. sp., (b) *sensu lato* to include *T. icemi* (Schwenk) and *T. magalhãesii* (Schwenk), (c) species inquirenda to include *T. heterogamiae* (Galeb) and *T. panesthiae* (Galeb) both inadequately described in the original. (2) *Euryconema paradisa* n.g., n. sp., (3) *Suifunema caudelli* n. g., n. sp., (4) *Galebia* n. g., to include *Oxyuris aegyptiaca* Galeb, 1878, (5) *Hammerschmidtella* n. g., to include *Oxyuris diesingi* Hammerschmidt, 1838, (6) *Leidynema* Schwenk, 1929 to include *L. appendiculata* (Leidy, 1850) n. comb., *L. cranifera* n. sp., and *L. delatorrei* n. sp., (7) *Blatticola* Schwenk, 1926 to include *B. blattae* (Graeffe, 1860) n. comb., (8) *Severianoia* (Schwenk, 1926) to include *Bulhøesia severianoii* Schwenk, 1926.

Within the subfamily Protrelloidinae the genera and species are: (1) *Protrelloides paradoxa* n. g., n. sp., (2) *Protrelleta floridana* n. g., n. sp. and (3) *Protrellina* n. g., to include *P. aurifluus* n. sp., *P. manni* n. sp., *Oxyuris australasiae* Pessoa & Correa, 1926, *Oxyuris künckelti* Galeb, 1878 and *Protrellus galebi* Schwenk, 1926. Forms considered as genera and species inquirenda are *Blattophila sphaerolaima* and *Protrellus aureus* both described by Cobb in 1920. The paper is illustrated by good figures and has a number of helpful keys to genera and species. J.N.O.

(b) A systematic account is given of 5 species of lung trematodes of the genus *Pneumonoeces*. Their geographical distribution in Russia is shown by a map and a table is included differentiating the 14 known species. R.T.L.

(c) Using the antiformin method Winogradowa finds that 55 per cent. of the reindeer in the Kola peninsula are infected with helminths, viz., 38 per cent. with nematodes, 13.8 per cent. with trematodes and 8.5 per cent. with cestodes. *Trichocephalus affinis* and *Paramphistomum cervi* occurred in 12 per cent. The other parasites found were *Skrjabinema tarandi*, *Cysticercus tenuicollis* and *Echinococcus granulosus*. R.T.L.

(d) Eckmann gives a differential table for the 5 recognized genera of Bucephalidae: *Prosoerhynchus*, *Bucephalopsis*, *Rhipidocotyle*, *Dolichoenterum* and *Bucephalus*.—Under each genus the differential characters of the species are tabulated. A section is devoted to synonymy. R.T.L.

(e) Kreis describes in detail the morphology of the adult stages of two new plant-parasitic nematodes.

Pristionchus longicaudatus n. g., n. sp., with three buccal teeth, a double-bulbed oesophagus, paired reflexed ovaries in the female and single testis in the male, resembles the genus *Oncholaimus* in the arrangement of the buccal region, but in other respects appears to be more closely related to *Diplogaster*, *Diplogaster* and *Diplogasteroides*. This form occurs in the outer leaves and leaf-bases of lettuce, causing a brown discolouration. *Rhabditis macrocheila* n. sp. occurs in the tissues of potato tubers causing symptoms very similar to those produced by *Tylenchus dipsaci*. It remains uncertain whether the nematode is a primary parasite or enters the tubers during storage and transport. Morphologically it most closely resembles *R. monohystera*.

M.J.T.

(f) In Palestine *Echinochasmus liliputanus* encysts in freshwater fishes of the genera *Tilapia* and *Nemachilus*. When fed to cats and dogs the eggs

of this fluke are found in the stools in a fortnight. *Echinochasmus mordax* has been found by Witenberg once in a dog, the specimens were smaller than those originally described by Looss (1899) from the pelican. R.T.L.

320—Zeitschrift für Zellforschung und Mikroskopische Anatomie.

- a. CHITWOOD, B. G. & HILL, C. H.—“A note on the esophageal glands of *Ascaris lumbricoides*.” XIV (4), 605-615, 17 figs., 2 refs. [1932.]

(a) Chitwood and Hill, in a detailed and critical study of the oesophageal glands of *Ascaris lumbricoides*, have attempted to elucidate the confusion which exists, as the result of differences in opinion, in regard to the structure of these organs.

The authors' investigations show that the oesophageal structures in this species of *Ascaris* are complex unicellular glands and do not consist of a single syncytial organ with two subdorsal nuclei and a single ventral nucleus. They consist of a dorsal and two subventral gland cells, the ramifications of which are connected, and occupy the intermuscular areas of a sector, while their nuclei are located at the extreme posterior end of the oesophagus. The “secretory granules” of another investigator are considered as probably the results of fixation in the cytoplasm of the glands; in the opinion of the authors the protoplasmic wall of the tubule is the secreting organ.

Prior to the examination of *Ascaris lumbricoides*, intra-cellular, branched, lobulate tubules in the oesophageal glands of a nematode had not been found; this discovery prompted the authors to re-examine specimens representing other genera and in several instances such structures were demonstrated. J.N.O.

321—Zentralblatt für Bakteriologie. Abteilung I. Originale.

- a. VOGEL, H. & GABALDON, A.—“Vestibulosestaria, eine neue Filarien-gattung aus Rattenarten.” CXXVI (1/2), 119-124, 4 figs. [October, 1932.]

(a) *Filaria Patersoni* Mazza, 1928 is described by Vogel and Gabaldon as type and only species of a new genus of *Setariinae*. It occurs in rats in the Argentine, Venezuela and Mexico. It differs from the nine known genera of this subfamily in possessing a well-developed vestibule. R.T.L.

322—Zoologischer Anzeiger.

- a. TABUNSCHTIKOWA, A. W.—“Einiges über *Fasciola gigantea* Cobbold.” C (7/8), 185-191, 2 figs., 15 refs. [15th October, 1932.]
 b. SZIDAT, L.—“Zur Entwicklungsgeschichte der Cyclocoeliden. Der Lebenszyklus von *Tracheophilus sisowi* Skrj. 1923.” C (7/8), 205-213, 3 figs., 6 refs. [15th October, 1932.]
 c. SPREHN, C.—“Über einige von Dr. Eisentraut in Bolivien gesammelte Nematoden.” C (11/12), 273-284, 7 figs., 16 refs. [15th November, 1932.]
 d. IHLE, J. E. W. & IHLE-LANDENBERG, M. E.—“Über einen neuen Cestodiarier (*Kosterina Kuiperi* n. gen., n. sp.) aus einer Schildkröte.” C (11/12), 309-316, 10 figs., 3 refs. [15th November, 1932.]

(a) Tabunschtikowa gives a detailed description of *Fasciola gigantea* of which 12 specimens were found in Leningrad in 1928 in the bile-ducts of an ox, along with *F. hepatica*.

The fluke is 39-48 mm. long and 7.5-9 mm. wide and has parallel sides which continue back to the abruptly rounded posterior end. The ventral sucker lies close to the oral, in the prostomium, and is very large. Medially directed gut-branches appear in the prostomium, and the gut-branches as a whole, together with the testes and ovary, show more secondary branches than in *F. hepatica*. The yolk glands begin to appear from 1.5 mm. to 2 mm. behind the ventral sucker. B.G.P.

(b) Szidat has elucidated the life-history of the cyclocoelid fluke, *Tracheophilus sisowi*, which he finds commonly parasitizing the bronchi and trachea of domestic ducks on the Kurische Nehrung.

The newly-hatched miracidium already contains a mature redia, which latter penetrates the intermediate host (species of *Planorbis* and *Lymnaea*) and gives rise to tailless cercariae. These do not, however, resemble cercariae. The oral sucker is modified as a piercing organ and the intestine is a closed ring. The cercariae encyst in the tissues of the snail, which is eaten by the duck. The infection route is probably via the intestinal wall, abdominal cavity and lungs. B.G.P.

(c) Sprehn here reports on the following nematodes collected in Bolivia by Dr. Eisentraut in 1930-1931. *Aspidodera binansata* and *Cruzia boliviana* n. sp. were found in the intestine of *Tolypeutes conurus*; *Camallanus magathi* n. sp. in the intestine of *Cinosternum scorpioides integrum*; *Physaloptera cerdocyona* n. sp. from under the skin of the head (?) of *Cerdocyon azarae*; *Physaloptera lagarda* n. sp. from *Tupinambis rufescens*; and *Oxyspirura brevisubulata* from *Tyto alba tuidava*. By means of tables of measurements *Cruzia boliviana* is differentiated from *C. travassosia*, *Camallanus magathi* from *C. americanus*, and *Physaloptera cerdocyona* from *P. anomala*. B.G.P.

(d) Ihle and Ihle-Landenberg describe *Kosterina kuiperi* n. g., n. sp. (*Amphilinidae*), a Cestodaria parasitic in the lungs of an Australian tortoise, *Chelodina longicollis*.

This form differs so markedly from other amphilinids (all of which occur in fishes), and especially in the absence of a proboscis and of frontal glands, that a new sub-family, *Kosterininae*, is erected to receive it. B.G.P.